

**REMARKS**

Pending claims 1-8 in this application were rejected in the Office Action mailed September 22, 2008. Claims 5 and 6 have been cancelled. Claims 1-4, 7 and 8 have been amended. New claims 9-15 have been added.

**Rejection Under 35 USC §101**

This application currently contains two independent claims, namely claims 1 and 2. In order to overcome the rejection under 35 USC §101, claims 1 and 2 have been amended to positively recite that the measured upper limb pressure waveforms are measured with a sensor, for example using applanation tonometry (see dependent claims 9 and 10). In addition, to overcome the rejection under 35 USC §101, the preamble in claims 1 and 2 has been amended to specifically recite that the method is carried out in a blood pressure measuring system.

With respect to claims 7 and 8, Applicant has amended the claims to recite, in accordance with the USPTO software patent guidelines, a computer-readable medium having a computer readable program.

In light of these amendments, Applicant respectfully requests that the rejection under 35 USC §101 be withdrawn.

**Cancelled Claims 5 and 6**

Claims 5 and 6 stood rejected under 35 USC § 112, second paragraph. Also, the drawings were objected to because the drawings did not specifically show the features of these claims. Claim 5 and 6 have been cancelled by the Applicant. As such, Applicant respectfully requests that the rejection under 35 USC §112, second paragraph, as well as the objection to the drawings, be withdrawn.

**Information Disclosure Statement**

The Assignee of this application has filed herewith an Information Disclosure Statement listing several prior art references which either recently came to its attention or the relevance of which has recently been made apparent. In particular, Applicant would

like to draw the Examiner's attention to the thesis of Ahmad Qasem which uses wavelet technology to identify the so-called second shoulder, and also correlates the location of the second shoulder to central systolic pressure using a scatter diagram. Applicant has amended claim 2 to state the time of the start of a component of said upper limb pressure waveform attributable to lower body wave reflection is located "by analyzing derivatives of the upper limb pressure waveform" in order to clearly distinguish the claimed invention over the disclosure in the Qasem thesis.

**Other Claim Amendments**

Applicant has also amended the claims generally so that the independent claims are directed to any upper limb pressure waveform rather than limited to the radial pressure waveform. The written description in the specification clearly supports the measurement of any waveform from the upper limb; see for example ¶ [0025], or ¶ [0028] which specifically states that the present invention only requires measurement of the brachial or radial waveform in order to determine central (aortic) systolic pressure. Note the claims also contain reference to a component of the upper limb pressure waveform attributable to *lower body* wave reflection. In contrast to the upper limb, the lower body refers to the trunk and the lower limbs, e.g., parts of the body supplied by the descending thoracic aorta.

Dependent claims 9 and 10 have been added to specifically recite that the upper limb pressure waveform is a radial waveform and that it is measured using applanation tonometry. Support for the tonometry limitation appears, for example, in ¶ [0024]. Dependent claims 11 and 12 have been added to specifically recite that the upper limb pressure waveform is a brachial waveform and that it is measured using a brachial cuff, ¶ [0025, 0028]. Other sensing devices known to those skilled in the art, besides a tonometer and an upper arm brachial cuff, can be used as well. Claims 1 and 2, as amended, are meant to cover use of these devices, as well as tonometers, brachial cuffs, and other known sensing devices capable of measuring an upper limb pressure waveform either directly or indirectly. For example, the language of claims 1 and 2 is meant to

cover any representation of pressure waveform in an upper limb artery, either direct or indirect, measured non-invasively by applanation tonometry or a cuff encircling the arm, finger or part thereof, invasively by a manometer system or any other sensor technology that can provide a representation of a pressure waveform.

Claim 13 is directed to limiting the search for the start of the component of the upper limb pressure waveform attributable to the lower body wave reflection to the first 40% of the length of time of the upper limb pressure waveform. Support for this claim limitation is shown, for example, in Fig. 3 and is also discussed in ¶ [0031].

Claims 14-15 relate to the use of time windows for which the search for the start of the component of the upper limb pressure waveform attributable to the lower body wave reflection occurs in the preferred method, when the claimed method is implemented in a programmed physical system. For example, as supported in the specification in ¶ [0030], the search for the second-shoulder inflection point does not begin until after a preselected time period after the wavefoot (e.g., 150 msec). On the other hand, as described in ¶ [0031], the search preferably terminates before a second predetermined time period after the initial wave foot (e.g., 250 msec) in order to exclude the incisura from being detected.

#### **Power of Attorney**

Responsibility for this matter has been transferred to the undersigned attorney. An executed Power of Attorney has been filed in this case.

#### **Conclusion**

Applicant respectfully submits that all of the outstanding objections and rejections to the claims and application have been addressed, and that the pending claims define patentable subject matter. Applicant, therefore, earnestly requests favorable consideration and allowance of the application.

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Reply to Office Action of September 22, 2008

No fees are believed to be due in connection with the filing of this paper. Nevertheless, should the Commissioner deem any fees to be now or hereafter due, the Commissioner is authorized to charge all fees to Deposit Account No. 012000.

Respectfully submitted,

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